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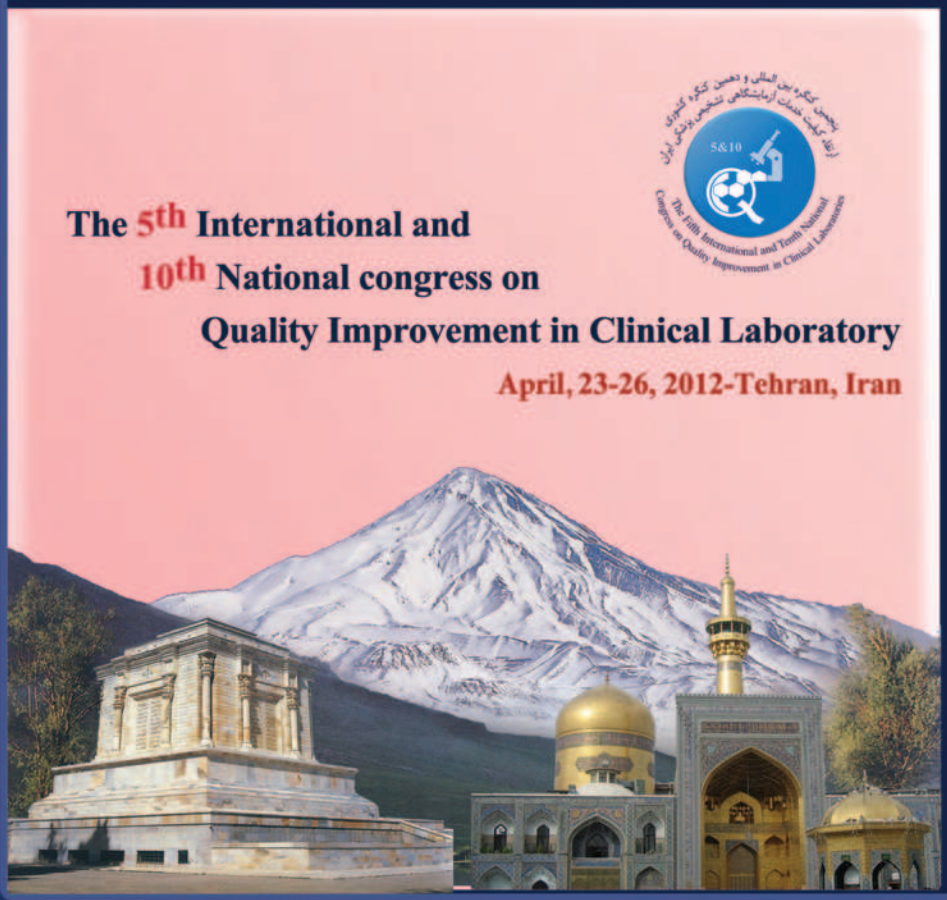
CONGRESS ABSTRACTS



Iranian Association of Clinical Laboratory Doctors

National Reference Laboratory

Iranian Association of Clinical Laboratory Specialists

Bacteriology

Study of The Antimicrobial Effect of Allicin(an active component of garlic)on *Proteus mirabilis* Strains Isolated from Patients with Urinary tract Infections

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Background and Aim:
P.mirabilis is one of the common causes of urinary tract infections in patients undergoing urinary catheterization.This bacterium is highly resistant to most commonly used antibiotics. Resistance of bacterium to the antibiotics is a major reason that causes treatment failure.So development of novel antibiotics is needed to combat *P.mirabilis* infections. The aim of this study was to investigate the antimicrobial effect of allicin on *P.mirabilis* strains isolated from patients with urinary tract infections.
Methods: In this study 20 clinical isolates and a standard ATCC12453 strain of *P.mirabilis* were included. The strains were isolated from patients with urinary tract infection and identified by conventional microbiological tests. allicin was purified using semi preparative HPLC procedure. MIC of allicin was determined by microdilution method using serial dilutions of aqueous allicin solution (4-512 µg/ml) in Mueller-Hinton broth. The MBC was determined by subculture of the well showing no apparent growth in a Mueller-Hinton agar plate. All experiments were carried out in triplicate. The results were interpreted according to CLSI.
Results:
The result of this study revealed that MICs of allicin were128µg/ml and 64 µg/ml for 90.5% and 9.5%of strains respectively. The MBC of allicin were 128 µg/ml, 256µg/ml and 512 µg/ml for 4.7%, 42.8% and 52.4% of strains respectively
Conclusions: The results showed that allicin can inhibit the growth of *P.mirabilis*.

Keywords: Antimicrobial effect, Allicin, *Proteus mirabilis*

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